Methane Pollution Reduction Under SB 1371

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CPUC Public Workshop for R. 15-01-008
Best Practices for Natural Gas Leak Abatement
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SB 1371 Presentation Roadmap

1. High Level Concepts / Guideposts

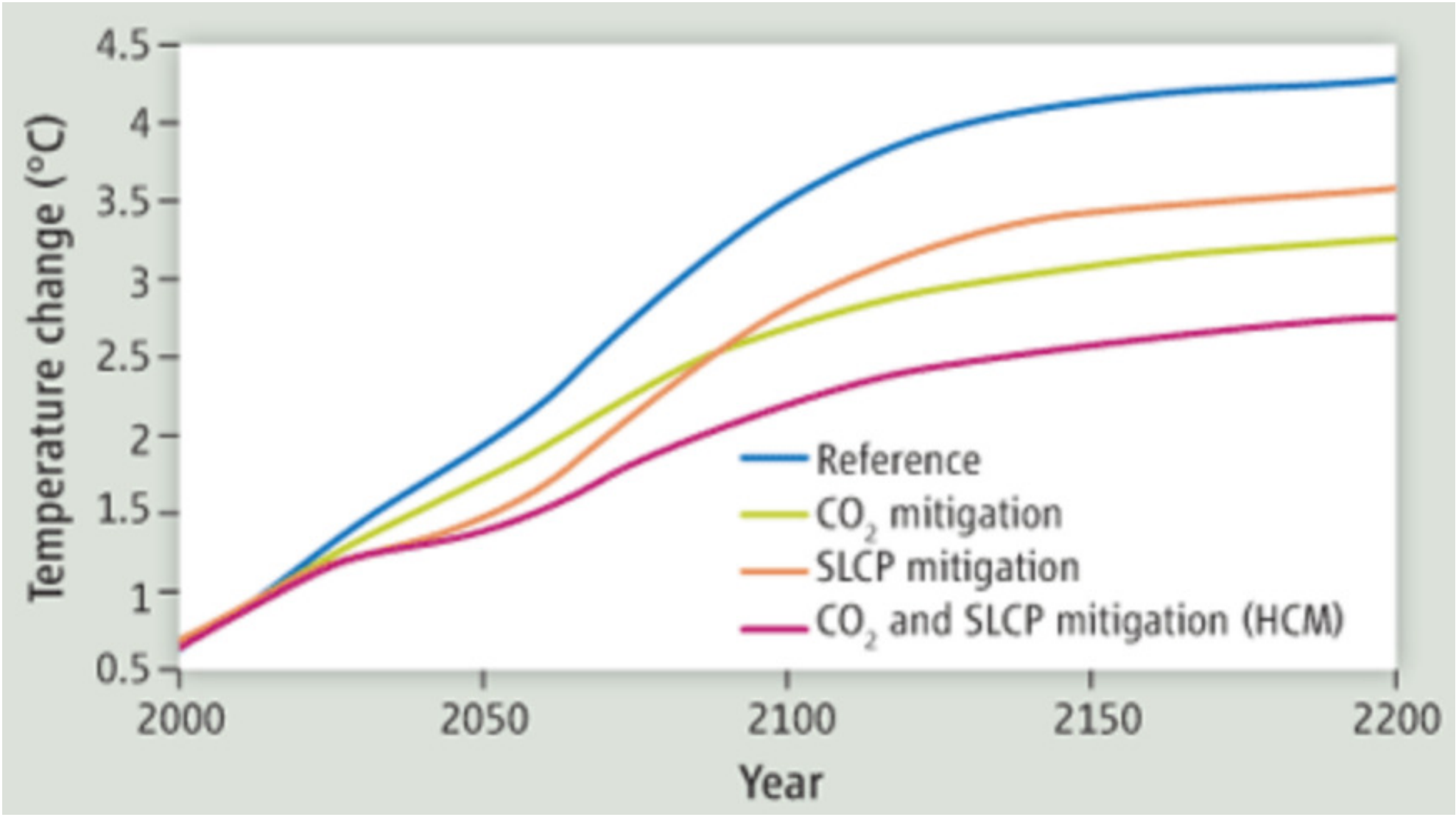
2. SB 1371 implementation policy
   - As legislated
   - Putting the bill into action

Concept # 1

Fighting climate change requires reducing methane emissions from all sources

SB 1371 is a core component of the state package for controlling SLCP emissions from the energy sector

Urgent need to reduce CO_2 and Methane



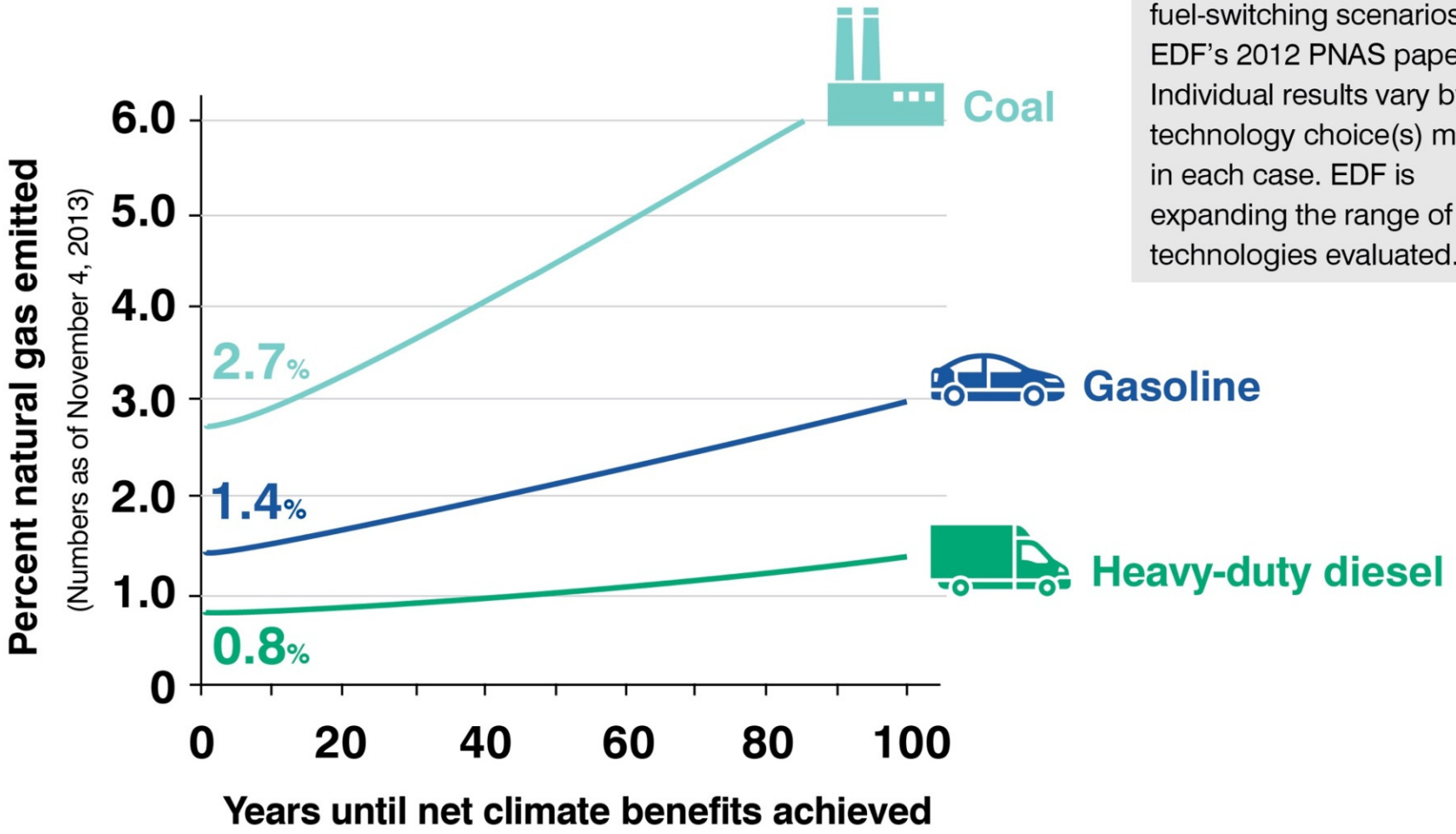
Shoemaker, et. al., **What Role for Short-Lived Climate Pollutants in Mitigation Policy?,** Science, December 19, 2013

Concept # 2

Natural gas presents a climate benefit only if methane leakage is kept to a minimum

Due to it's potency, even a small amount of methane leakage can have large climate relevance

Can natural gas deliver sustained benefits?



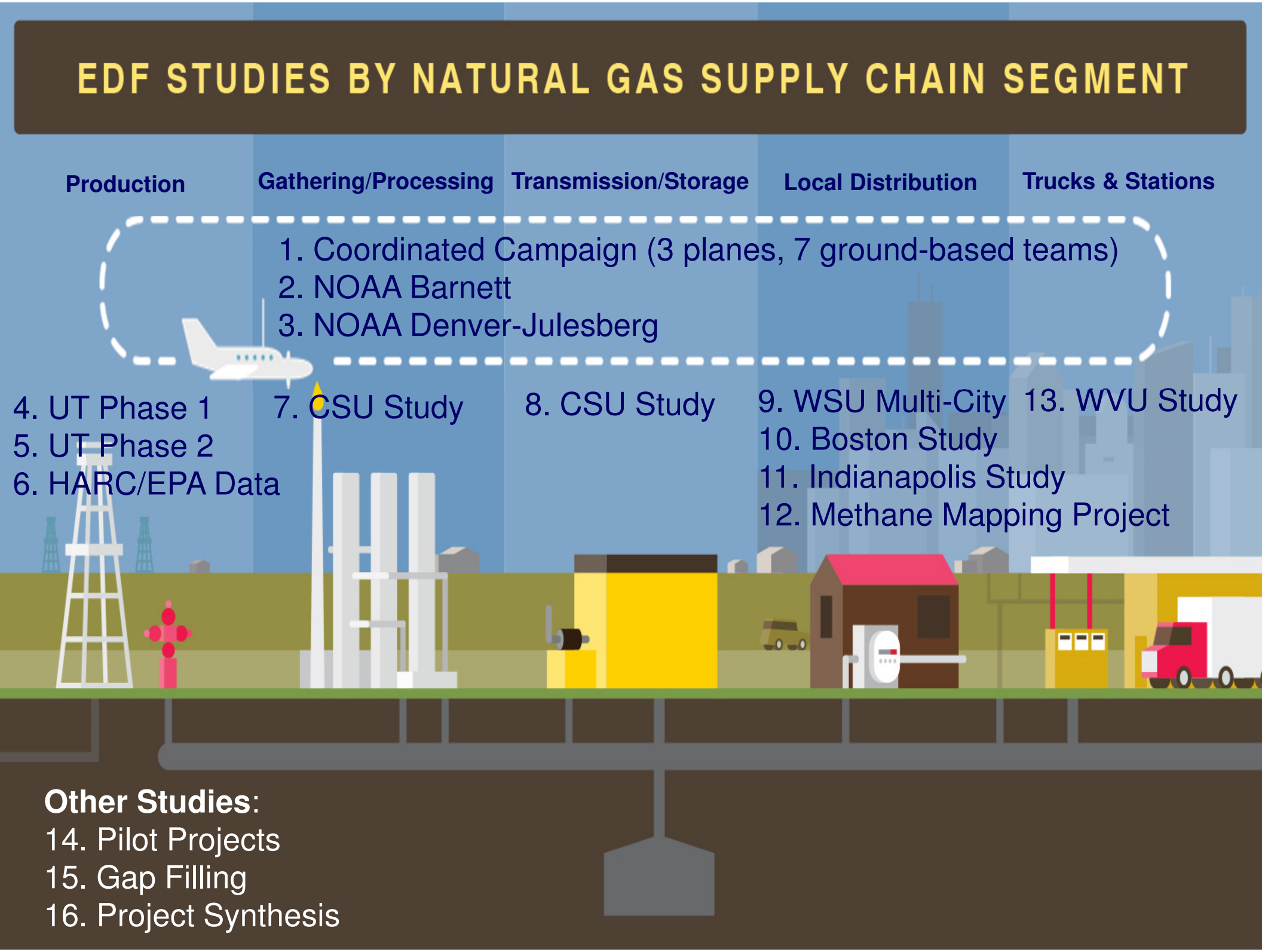
Updated calculations of fuel-switching scenarios in EDF's 2012 PNAS paper.* Individual results vary by the technology choice(s) made in each case. EDF is expanding the range of technologies evaluated.

*Adapted from Alvarez et al. (2012) PNAS, 109: 6435–6440, reflecting new IPCC AR5 & 2013 EPA GHG data. IPCC updates: (1) direct/indirect radiative forcing of CH_4 and CO_2, (2) CH_4 lifetime, (3) CO_2 impulse response function. Additional effects due to climate-carbon feedbacks and CO_2 from the oxidation of CH_4 not included (AR5 lacks data to support time-dependent analysis but EDF believes these effects to be small). Emissions updates include factors in Table 1 and corresponding LREF values in Table S1 of PNAS paper; an LREF value specific to heavy-duty CNG vehicles is now used.

Concept # 3

To develop sound methane policy for the energy sector, we must understand the sources better

EDF STUDIES BY NATURAL GAS SUPPLY CHAIN SEGMENT



Other Studies:

14. Pilot Projects
15. Gap Filling
16. Project Synthesis

Public Policy Behind the Passage and Implementation of SB 1371

- SB 1371 was authored by Senator Leno, co-authored by Senator Hill and Assembly Member Mullin, with major elements negotiated with EDF and others
- A bill to ensure that reducing environmental harm of methane emissions was considered / included in CPUC proceedings and utility practices – without sacrificing or undermining public safety

SB 1371 Policy Implementation

A cross-cutting law to achieve 2 goals in Section 975 (b): With priority given to safety, reliability, and affordability of service, the commission shall adopt rules and procedures … to achieve both of the following:

(1) Minimize leaks as a hazard …

(2) While giving due consideration to the cost considerations of Section 977, **reduce emissions of natural gas** from those commission-regulated gas pipeline facilities that are intrastate transmission and distribution lines **to the maximum extent feasible** in order to advance the state's goals in reducing emissions of greenhouse gases …

SB 1371 Policy Implementation

A cross-cutting law to ensure California utilities are **operating and maintaining** their natural gas systems using the best industry practices for delivering gas to end users instead of being released into the atmosphere

- Pertains to “avoidance, reduction, and repair of leaks and leaking components” – Section 975(e)(1)
- Requires an evaluation of “operations, maintenance, and repair practices” - Section 975(e)(3)
- Includes practices for “leak surveys, patrols, leak survey technology, leak prevention, and leak reduction” - Section 975(e)(4)

SB 1371 Policy Implementation

Proceeding should include practices for **preventing**, **finding** / **quantifying**, and **repairing** emissions sources and leaks

Preventing

- ✓ Pipeline replacement
- ✓ New pipe materials selection
- ✓ Pipe maintenance practices
- ✓ Equipment installation

Finding / Quantifying

- ✓ Leak detection technology
- ✓ Inspection and leak detection practices
- ✓ Leak quantification
- ✓ Leak tracking and mapping

Repairing

- ✓ Leak repair timelines
- ✓ Leak repair prioritization
- ✓ Pipeline repair practices
- ✓ Leak prone pipe replacement

SB 1371 Policy Implementation

Proceeding should include evaluation of all relevant information:

- ✓ Emerging science and research
- ✓ US EPA Natural Gas Star program
- ✓ NYSEARCH
- ✓ 50-state NASPR Compendium (NARUC)
- ✓ California utility GRC requests and discussion documents
- ✓ Other docs and proceedings as they emerge

Should also provide for updating over time …

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